Mundane energies

Mundane energies: the working body as heat source in the Indian Himalayas

Abstract

This paper takes the case of heating the body to show how non-commodified energy forms make up part of the thermal landscape in Pahari villages like Gau in the Indian Himalayas. In Gau, the person is a resource as well as a beneficiary in membership of the household, and through the activity of working the person produces energy, which heats the body in the winter chill. This energy means the capacity to do work, as it safeguards the body from the debilitating risks to health from the cold. Working life in Gau is irreconcilable with the room-heating model of domestic thermal regulation, because of work, architecture and subsistence forms. The idea of heating the walled space around the body becomes superfluous as it is the active body which heats and is heated in the direct carrying out of tasks necessary to the sustenance of the household.

Introduction

In recent decades forms of energy such as coal (which has become a major source of energy in India and China (IEA 2015)), and woodfuel (in the Himalayas (Bhojvaid et al 2014)) have become controversial due to science charting how these and other emissions are causing climate change (Stocker et al 2013). Different forms of energy are used in different parts of the world for cooking, lighting and transport as well as to regulate body temperature. In India, many villages are not connected to the electricity grid (Pachauri and Jiang 2008), or if they are, use electricity to fulfill only some of their energy needs. I focus in this article on how people in Gau, a village in the Indian Himalayas, while using energy commodities such as electricity to light their houses and accomplish other energy tasks, would warm their bodies in cold weather using the mundane bioenergy of the body. In many parts of the world, rooms containing people are heated during cold weather, thus heating the people inside these rooms. For those working outside, such as the agropastoralists in Gau, however, this is not a viable solution. While wage earnings in town from temporary migrant relatives pay for chilly cement houses and synthetic sweaters, people in Gau would work outside during the cold winter, contributing to the household economy and warming themselves at the same time.

Pahari villages in southern Himachal Pradesh, north India are perched on the mountainside, surrounded by terraced fields, pastures and forest. People in Gau practice a mixed economy, growing tomatoes for sale, and wheat, maize and beans for consumption, and often with at least one family member employed for wages. The milk produced by the stall-fed dairy buffalo and cows was consumed and sold. Though all the villagers in Gau had Below Poverty Line ration cards, most households had fields and pastures which provided staple grains and milk for much of the year. I spent ten months in Gau in 2012-2013, carrying out my doctoral fieldwork, and returned in early 2014 for a further three weeks.[1] While in the village I rented a shared room, eating with the family. I would go out to cut grass for fodder and do other agropastoral work with the women as well as doing interviews in peoples' homes. This article focuses on the colder winter months between November and March.

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By looking at work and the use of different technologies in Gau, I hope to illustrate the energy practices of the people there. These included the use of fire and some electric devices. Most pertinent for my argument, though, it was the work that people did with their bodies, which had the effect of heating them without the use of technological devices other than their clothes, that opened up the idea of energy use for me. In this paper I describe life in Gau, discuss the mixed energy-use practices there, and then look at a few of the ways in which heating was undertaken, before focusing on physical activity as a means of heating the body.

When heat is energy (Ong 2012), the work-lifestyle in the village becomes an issue of energy as well. Vannini and Taggart, writing about how off-gridders in Canada heated themselves and their houses, called ‘thermoception...the capacity to do work’ (2014:67). After a consideration of the extra-somatic energy forms used in Gau I return to this issue of work in considering more specifically how people solve the problem of cold weather in somatic ways.

Energy - commodity and mundane bioenergy

Energy is not an aim in itself, rather people use different energies to accomplish tasks. The main purposes of energy include heating and cooling the body, heating and cooling water and food, as well as uses such as transport and lighting. This article is an attempt to further bridge the anthropology-energy gap by widening the concept of energy to overlap with work. This makes sense, I argue, because many of the tasks that are done by electronic conveniences are ones that can also be done by hand. In fact, in Gau several commodified and 'by-hand' methods coexist. It is worth highlighting here that an interest in energy use may be linked to a worldview that sees energy forms as inherently interchangeable technologies. For the people whose lives this article briefly describes, however, energy forms are not always simply replaceable.

The hand-turned sewing machines provided young women with a bit of extra income.

Some households in Gau used electric churns to churn milk and others used a wooden churn operated by pulling a rope back and forth, spinning a wooden flared peg in the round pot containing the milk. Grain would generally be milled in electric mills, run as small businesses by wealthier households. In the past one had to take the grain to distant water mills. However, pulses might be crushed using hand-turned mills, consisting of two round stones above each other, between which the pulses were placed. Some households had electric rings to cook on. Even these households, though, would still burn the wood fire when cooking, the ring used as an extra heater, to keep *daal* (bean or lentil stew) warm or to cook rice.

The *roti* (flat wheat or maize bread) could only be cooked properly on the coals. Chandrashekhar's (2015) article on rural households in India targeted for carbon emission reduction described how dual cookstove use became the norm when households were provided with fuel-efficient cookstoves, rather than these replacing the woodfuel *chulhas* outright.

In this way people in Gau, as perhaps across most of rural India, practiced what one might call a mixed energy economy. They had electric lights in their houses, burned firewood for thermal needs, and used the labour power of the human body to detach leafy branches from trees and transport them home to feed the animals. The form of energy used mattered to people in Gau. As Crane, Roncoli and Hoogenboom have observed:

> '[A]daptive processes and technologies, whether short term or long term, are more than simple technical responses to biophysical conditions. Instead, adaptive processes are social phenomena whose significance and effects expand well beyond changing climate conditions' (2011).

The social and material are thus intertwined, contingent and connected by means of energy. Practices of thermal regulation, therefore, whether in Gau or elsewhere, are not simply changed and they have material, social and ecological limits, as Shove (2003) showed for laundry and body washing practices in the UK.

This paper takes the case of heating the body to show how energy forms connect up contingently with other aspects of life. It connects ubiquitous energy use with work, architecture and subsistence forms. The use of different forms of energy for heating is a social as well as a technical question in

Gau. Reasons for preferring one technology for domestic energy use over another varied according to the particular problem being solved. While the fire would burn for over an hour to cook supper, then heating water on the second pot position on the *chulha* was convenient. On the other hand, churning the milk electrically saved time in the morning. The form energy comes in then (firewood, electric or hand), is not an exchangeable matter. It links in to systems of work and subsistence which, if disrupted, would have implications across cash, protein supply (from the dairy and meat animals) and the household work unit.

Keeping warm in Gau

The problem of warming the body is faced by people wherever the weather may be cold. Thermal regulation is practiced all over the world, in cities as well as rural areas. Work on fuel poverty in the UK (O'neill, Jinks and Squire 2006) and the US (Harrison and Popke 2011) has looked at how people struggle to heat their homes and what this means for their lives. The cold of the winter months between November and April is a problem for people in Gau because of the risk of illness, i.e. of the body going wrong. The body is 'a thing' (Ingold, 2012:437), it is physical, as well as social, moral and so forth, and the thingness of it makes it vulnerable to the physical elements of the weather, as much as any other 'thing' in the landscape (Neimanis and Walker 2014). Bodies' relationships with heat and cold are tempered by factors such as metabolism, movement, adapted habit and clothing. In a life lived outside the body encounters and experiences the weather. The temperature and moisture felt by the body is not only to do with what comes out of the sky, but also with the various ways in which people block, welcome and modify these weather flows of temperature, moisture and wind. In this section I consider a number of ways people would keep warm in Gau, including food and drink, clothing, housing and the fire, before moving on to what I argue is the main way people in Gau would keep warm when outside. Together these make up the mixed energy economy in Gau as applied to heating the body in the cold.

Having got soaked in the cold winter rain during a wedding, I alerted my neighbor Karishma to pain I was experiencing in my stomach, who advised me to drink hot water, change my clothes, and sit by the fire. Consuming warm foods and drink as well as wearing warm and dry clothing were common solutions to the problem of cold in Gau. Warm food included food that was considered warming such as meat and clarified butter, *ghi*, as well as recently cooked food with a high temperature. These came from the buffalo and goats for whom the fodder was procured.

In the cold season at night in Gau shutters would cover the small windows and the wooden doors would be wedged closed. Everyone would sleep in their clothes. Beds consisted of a quilt made of old clothing stitched together in many layers, covered in a cloth sewn closed and covered again in a removable white sleeve. Bedding covers got washed once or twice a year. The shelter of the house would sometimes fail (rain dripping from the roof, the wind blowing the door open in the middle of the night), but generally the structure kept the elements out.

The fire was an important part of thermal regulation in Gau. Fodder, either grass or leafy twigs, would be fed to the village cows, goats and water buffalo. The de-leafed twigs would be piled outside and then packed into neat bundles to dry. These provided the household with firewood. The fire served to cook food, to heat water for washing and to heat the bodies sitting around it, toes and fingers stretched towards it in the chill morning air. The cooking fire would warm the space immediately around it, though the window would be covered only with a metal grille and the door would often stand open, to allow the smoke to leave.

The chulha *would be made of bricks and covered with clay.*

In winter the fireside would be a place to gather in early mornings and late evenings. Sometimes the woman cooking might heap the embers from the fire in a pan and take them in to where the family was sitting and eating. They would warm the space while producing minimal smoke. Kitchens were small and the family would huddle round the cooking fire (*chulha*) in the evening while neighbours sat on the doorstep to exchange gossip or borrow embers to start their own fire.

The fire, though, is not a solution to the cold which can be applied out on the Himalayan mountainside. The people of Gau spent their days outside, working in their terraced fields, pastures and forest. I now highlight the importance of this work for maintaining the household and bring my focus to the processes of keeping warm whilst working out in the cold air.

Work and the household in Gau

One day I was sitting with some girls outside the village dispensary and a man of the barber caste whose foot had a nasty gash in it was being treated by the village nurse. She said 'don't get manure on it,' and he replied 'how can I not get manure on it?' thus expressing the necessity to work. Agropastoral work constituted life in Gau, in the sense that this was how most people spent most of their daylight hours. 'In the city they rest.' I was told, 'Here we work for our food [bread].'[2] The moving person in Gau would carry out physical tasks - lifting, carrying, processing, cutting, milking, walking. People would sit outside on their slate courtyards washing clothes, twisting rope or spreading beans to dry. There would be a constant trickle of people walking along the main path through the village on some task or other. Karishma, my neighbour, was angry with her brother who had finished school but did not yet have a job, saying to me: if he doesn't work, how can he expect to eat? Pankaj, the father in the family where I stayed, would joke about how I should be given food when I had gone to collect fodder. The household organises labour and resources (Carsten and Hugh-Jones 1995, Wilk 1991, Pahl 1984) and in Gau members of the household would eat together, work together and sustain the animals and land belonging to their household. As Frick wrote with reference to his fieldwork in neighbouring Nepal, 'work is for the common good of those who share the hearth' (1994:130).

[2] '*sheher me admi aram ko. Yaha roti me kam karte hai*.'

The problem of the cold is a problem for the household in Gau because when people are incapacitated by illness due to the cold, they become unable to undertake their work, which must be done by someone, or there would not be food to eat, as women would remark to me.

Gathering fodder

Going to cut fodder is one major task undertaken by the able-bodied in Gau. Men as well as women would go out first thing in the morning and sometimes also later in the day to harvest and carry fodder, all year round. They would gather dry or green grass from the steep hillsides and cut pollarded leafy twigs from the trees around the terraced fields. In winter the tree scheduled for pollarding would be one of two or three species, and in summer another, and in the monsoon trees were not cut; the wet, green grass was enjoyed by the buffalo. It was in doing this kind of work that the people of Gau would be exposed to the cold, the heat and the rain. Everything about going for fodder, from the sharpening of the sickle, to the feeding of the buffalo, would take place under the sky and in the temperature and the weather that the mountainside was subject to at that moment.

On winter mornings women would leave relatively late, at eight or so, when the sun had started to warm the mountainside. They would go to grassy hillsides which were not exposed to the chill wind, because of the folds of the mountain. One girl told me she will never go out to work if it looks like rain during the cold season, and another that well, she had to go, because who else would go? Sometimes exposed windy places would be sites of work even in the cold. I went with Kali, an unmarried Brahmin girl, up the hill to cut the young wheat which had such poor growth they were giving up on that field and harvesting it for fodder instead. She wore several layers of jumpers and a thin windbreaker on top. The field Kali and I were headed for was on the top of the hill. I had been there a few times to graze the oxen with her, and feed the buffalo with old dried maize stalks from the monsoon harvest. It was a rather flat field, exposed to the cold wind. We got to work cutting the longer and shorter stalks of young wheat, along with whatever weeds had grown up alongside them. She would pull the sickle in a sharp jab, cutting through the stalks held in her left hand in one slice. Then she piled them up nearby, going around afterwards to take a few long stalks to twist around them and hold them together in sheaves. Though we had to squat down, rather than standing comfortably as on most pasture hillsides, it was satisfying work, cutting the unevenly growing young wheat in the rows it had been ploughed into. Kali had been up since very early; her family worked her rather hard. Carrying the green wheat down the very steep path, the gravel was a stumbling risk, but Kali stepped confidently through her tiredness. Her brother was at school and her sister studying computers. With a priest father who rarely did farm work, much of the labour was left to Kali and her mother. Back in the village I was called in to the courtyard by Karishma and left my small bundle of green wheat for Kali to take down to her animal house later. We had been in activity throughout and by the end I did not feel the chill wind.

The working body as a heat source

Though the technologies and practices described above would warm people in Gau, work itself was actually a major solution to the problem of the cold. While sitting on plastic sacking outside Anjana's house one day, I asked the young women from a few neighbouring houses what they do to stay warm in the cold mornings. They talked about the morning as a time when you feel cold, but

you soak *senkne* the heat by the fire, then you go out to work (to cut fodder), and you *get warm through working*.

Anjana's sister told me that she would sit beside the fire in the morning, and then she started work. Working, that is going to collect fodder, she warmed up. This warmth did not extend out to the cold season hillside where she climbed, cut and bundled twigs. It was contained in her active body, warding off chill and discomfort. The work of the fodder, then, warms the bodies of the women (and men) who gather it. When the body is in movement this warms it through and work all day can mean warmth all day. In the expending of their labour, the people of Gau would produce the means of their subsistence, *and* safeguard their bodies from the risky cold.

Conclusion

The problem with becoming cold, according to people in Gau, was the risk of falling ill, which rendered the person unable to work. Although people in Gau wore thin synthetic jumpers and sat by the fire when at home, they did not refrain from working in the cold but explicitly welcomed the work as warming. So work was a way to stay safe and warm, and also a reason to stay safe and warm, from the point of view of the sustaining, task-giving and hierarchical household.

For people in Gau, the benefit of staying warm through working in the cold is clear. From the point of view of scholars, policymakers and other stakeholders with an interest in climate change, both patterns of energy use (mitigation), and how to safeguard bodies in the changing weather (adaptation), however, I posit this idea of work as warming in itself as a contribution to thinking about how to keep bodies warm. Thermal regulation in winter is a question of energy use – how to keep bodies safe from the cold – through work or through indoor heating systems. Energies may be converted, or have equivalent quantities – to heat enough water to wash in by the fire or by the electric ring for instance – but these variations in energy *form* have social implications, as well as mattering for climate change and resource extraction. Shifting to heating a room electrically for instance, would imply rebuilding houses in Gau and also spending daytime inside. The energy forms compatible with a life that involves much going for fodder are contingent on the materials and practices that it consists of.

In shifting the focus from how to warm spaces (rooms) to warming the bodies themselves from the inside through activity and in particular movement and exertion, I would like to take seriously the way people in Gau solve the problem of cold. My argument bypasses the assumption that labour

must be waged, (although members of many households in Gau did work for wages), because only then can energy be purchased and enclosed space heated. And that this is the only way to situate the body to preserve it from unpleasant or dangerous cold. By writing about the energy coming from within the working bodies themselves I would like to expand the definition of energy in this conversation, to open it up beyond conventional 'consumable' energy forms.

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